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BRIEFER ARTICLES

SOME NEW WASHINGTON PLANTS

In his *Species and varieties*, DE VRIES makes the following statement: "[The subgenus *Onagra*] seems to be rich in elementary species, but an adequate study of them has as yet not been made. Unfortunately many of the better systematists are in the habit of throwing all these interesting forms together, and of omitting their descriptive study." A small collection of *Oenotherae* recently determined at the Gray Herbarium for W. N. SUKSDORF well exemplified the justice of this criticism, for although it lacked one of the two species of *Onagra* attributed to Washington in PIPER's recent flora, it contained no less than three undoubtedly distinct species of this subgenus; one a very large-flowered plant of obvious relationship to *Oenothera Hookeri* T. & G., the second probably referable to *O. strigosa* (Rydb.) Mack. & Bush, the third a new species.

Oenothera* (ONAGRA) *cheradophila Bartlett, sp. nov.—Herba erecta ca. 1^m alta simplex vel in parte inferiore ramosa. Caulis vinaceo-purpureus deorsum albo-pilosus sursum subappresse strigosus. Folia caulina pallido-viridia lanceolata utrinque albo-strigosa; inferiora usque ad 3^{cm} lata 16^{cm} longa, apice acuta, basi in petiolum alatum brevem decurrentia, leviter remoteque denticulata, denticulis apice albis induratis; superiora parviora integerrima sessilia apice basique acuta. Bracteae foliis supremis similes sed eis parviores, maximae a capsulis maturis plerumque superatae infra mediam 6^{mm} latae 2.5^{cm} longae. Hypanthium 2.5^{cm} longum inferne ca. 2^{mm} crassum superne aliquanto crassius, extus patenter albo-pilosum. Calycis segmenta pallido-viridia densius subappresse albo-strigosa deltoidea 11–13^{mm} longa ad basin 4^{mm} lata, apicibus liberis, calyce nondum expanso, vix 1^{mm} longis acutiusculis. Petala flava saepe rosaceo-tincta 8^{mm} longa infra apicem 7.5^{mm} lata basi cuneata apice altiuscule retusa. Stamina corollam paulo superanta, filamentis planis ca. 6.5^{mm} longis sursum gradatim angustatis, antheris ca. 6.3^{mm} longis brevissime infra mediam affixis. Styli pars hypanthio exserta 2.5^{mm} longa. Stigma 4-partitum viride, ramis subteretibus carnosissimis ascendentibus 4^{mm} longis plerumque apices filamentorum vix attingentibus, raro paululo longioribus sed nunquam apices antherarum superantibus. Capsula matura prope basin 5–6^{mm} crassa 3^{cm} longa subquadrangula pallido- vel subolivaceo-viridis appresse albo-strigosa, ad apicem versus gradatim angustata et in rostrum 3^{mm} longum desinens; rostri segmenta, capsula dehisceta, recte divergentia. Semina brunneola prismatica 1.5–2^{mm} longa.

Type, *Suksdorf* 5860 in Herb. Gray, low sandy river bank, Bingen, W. Klickitat County, Washington, 20 Aug. 1906. Other specimens which may be placed here are *J. S. Cotton* 620, sandy banks of river, Prosser, Yakima County, Washington, and (?) *L. N. Gooding* 271, river sand-bar, Middle Fork of Powder River, Johnson County, Wyoming. These were both distributed as *Onagra strigosa* Rydb., a clearly distinct species of which there is a cotype in the Gray Herbarium.

The strongest diagnostic features of the two plants are as follows:

| OENOTHERA STRIGOSA | OENOTHERA CHERADOPHILA |
|---|---|
| Bracts twice or thrice as long as the mature capsule, obtuse at base. | Bracts almost always considerably shorter than the mature capsule, acute at base. |
| Flower bud and hypanthium ochraceo-vinaceous, with sparse spreading pubescence. | Flower bud and hypanthium greenish yellow, pubescence more dense. |
| Free tips of calyx segments (in bud) 3 ^{mm} long. Petals 1.5-2 ^{cm} long. Color light yellow, fugaceous in wilting. | Free tips of calyx segments (in bud) less than 1 ^{mm} long. Petals 8 ^{mm} long or less. Color greenish yellow, intense, persistent after wilting. |
| Stamens shorter than the corolla. | Stamens usually slightly longer than the corolla. |
| Stigma a little exceeding the stamens, lobes flattish, spreading. | Stigma usually reaching only to end of filaments, teretish, ascending. |

In the case of both species the measurements were made from typical flowers of type material. At the end of the inflorescence, or on weak lateral branches, both *O. strigosa* and *O. cheradophila* often bear flowers which are greatly reduced in size and in which the petals are disproportionately small. In such flowers of the former species, the stamens are likely to be longer than the petals.

It is worthy of note that very little of the material which western collectors have distributed as *Onagra strigosa* Rydb. matches the plant from Pony, Montana, which Rydberg designated as the type of his species.

LEWISIA PYGMAEA (Gray) Rob., var. *aridorum* Bartlett, var. nov., caudice foliisque radicalibus eis formae typicae similibus; scapis brevioribus robustioribus a foliis longe superatis. Bractae lanceolatae margine glandulis subatris longistipitatis praeditae. Pedicelli 1-3 quam bractae paulo, nunquam duplo, longiores. Sepala usque ad 5^{mm} longa late ovata vel orbicularia margine denticulata, denticulis in glandulas longistipitatas atras desinentibus. Petala (ut in forma typica ex loco eodem) alba, anguste oblonga quam sepala dimidio longiora apice etiam glandulas stipitatas 3-4 gerenta. Capsula turbinata atro-brunnea 4.5^{mm} longa.

Type, *Suksdorf 5725* in Herb. Gray, dry, bare places in meadows, Mt. Paddo (Adams), Yakima County, Washington.

Unusually well marked as a variety by the extreme development of stipitate glands on the bracts, sepals, and petals. The variation is perhaps induced by habitat, for the typical form of the species (except for the fact that it has white petals) occurs at the same altitude on the mountain, growing intermingled with the variety to some extent, but more abundantly "in damp or wet sandy places." It may be that all of the Mt. Paddo material constitutes a species, of which the plant above described is a variety, differing from *Lewisia nevadensis* in its denticulate calyx segments and from *L. pygmaea* in its white corolla. Until a more significant difference from *L. pygmaea* comes to light, such a treatment is hardly to be justified, for in at least one species of the genus, *L. rediviva*, the color of the corolla is known to vary from deep rose to pure white.—H. H. BARTLETT, *Gray Herbarium*.

SOME PERPLEXITIES OF THE INDEXER

During the last few years the work on the *Card index of new species, varieties, and forms of American plants* has necessitated the examination of a large number of taxonomic papers of both American and foreign authorship. Some of the perplexing questions which have arisen I wish to bring before the botanical systematist. It may be urged, as one correspondent has already suggested, that "the scientist writes for the student and not for the indexer." This is true, but is it the whole truth? In these days of multiplicity of publications it is well-nigh impossible for each student of systematic botany to review carefully all the literature which may possibly bear upon his subject or contain a new name in the group upon which he is working. Not long ago a publication relating to a state flora and containing more than 600 pages was carefully examined, with the result that six new combinations were found; but there was no indication whatever that these were new. Can each student spare time for this? With the aid of such works as the *Index Kewensis*, the *Index to North American fungi*, the *Card index*, etc., the student readily turns to the original descriptions of the plants in the group which interests him, and from articles containing these descriptions he finds references to the important works relating to his specialty. He is also able to ascertain whether a name or combination which he proposes to launch as new has been used previously. The relation of the index to the systematist is that of a catalogue to the worker in a library. Now the scientist is not the person who will take his time for index work, and even if he did he would be limited to the few groups